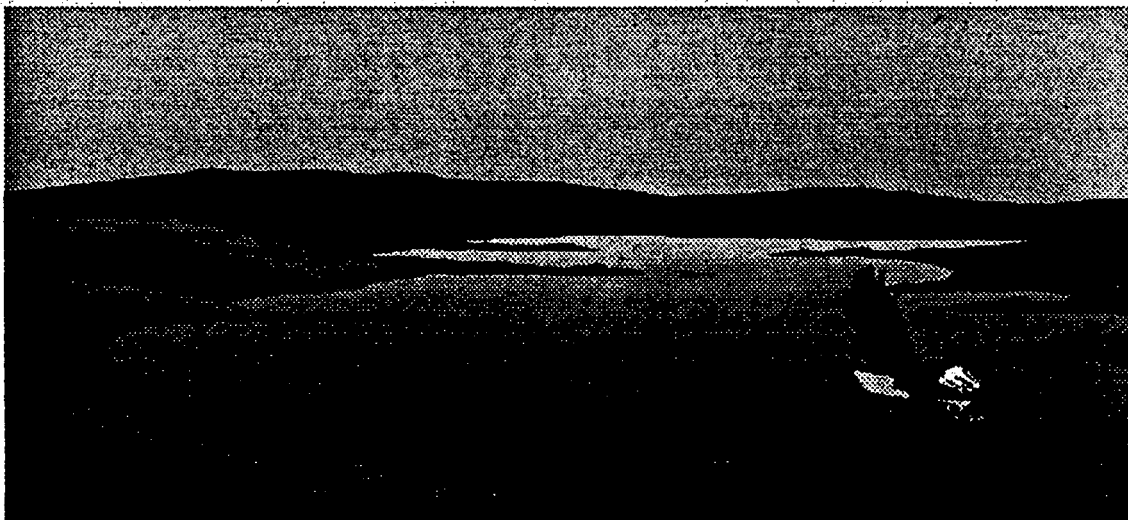


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# ENVIRONMENTAL RESTORATION PROGRAM

Monthly Report For  
*February, 1991*



March 20, 1991



**EG&G ROCKY FLATS**

ADMINISTRATIVE

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U.S. DEPARTMENT OF ENERGY  
ROCKY FLATS PLANT

ENVIRONMENTAL RESTORATION  
PROGRAM

*MONTHLY REPORT FOR*  
*FEBRUARY 1991*

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## **1.0 INTRODUCTION**

**This Monthly Status Report presents the technical achievements of the Rocky Flats Environmental Restoration Program for February 1991. This Program implements the Inter-Agency Agreement between the U.S. Department of Energy, the U.S. Environmental Protection Agency, and the State of Colorado to investigate, assess, and remediate, where required, contaminated areas at or adjacent to DOE's Rocky Flats Plant in Golden, Colorado. This Agreement was signed on January 22, 1991. The work is being performed for DOE by EG&G Rocky Flats, Inc.**

**Section 2.0 of this report, the Executive Summary, highlights significant achievements and summarizes the milestones completed during February. It also presents any major unresolved issues of the Program. Technical progress, schedule status, and milestone status for each Operable Unit as well as other Program activities are presented in Section 3.0. Operable Units in which no FY91 activity is planned are not included. Section 4.0 contains the schedules for routine environmental sampling as required by Paragraph 210 of the Inter-Agency Agreement.**

## **2.0 EXECUTIVE SUMMARY**

### **2.1 SIGNIFICANT ACTIVITIES AND ACHIEVEMENTS FOR THE REPORT MONTH**

In accordance with Part 42 of the Inter-Agency Agreement (IAG), on February 8, 1991, EPA/CDH granted extensions (listed below) to several IAG milestone dates, as requested by DOE. The extensions were associated with the recent revisions to DOE procurement policies, which resulted in 60-day delays on many contract activities.

The following documents, which were due to EPA/CDH on January 25, 1991, are now due on March 1, 1991:

- Final Standard Operating Procedure Addendum for OU 1 Phase III RFI/RI Work Plan
- Final Standard Operating Procedures
  - Volume 4 - Surface Water
  - Volume 5 - Ecology

The following documents, which were due to EPA/CDH on February 1, 1991, are now due on March 1, 1991:

- Final Quality Assurance Project Plan
- Final Standard Operating Procedures
  - Volume 1 - Field Operations
  - Volume 2 - Groundwater
  - Volume 3 - Geotechnical
  - Volume 6 - Air
- Final Standard Operating Procedure Addendum for OU 2 Phase II RFI/RI Work Plan

In addition, the draft Work Plan for Discharge Limits for Radionuclides, which was due on March 18, 1991, is due on April 5, 1991, and the final Treatability Study Plan, which was due on February 25, 1991, is due on June 3, 1991.

The Implementation Document for OU 1 - 881 Hillside Area was submitted to EPA/CDH on the February 22, 1991, IAG milestone date. This document included the specifications and drawings for all phases of the Interim Remedial Action (IRA) construction. It will be reviewed by EPA and CDH; however, formal approval is not required.

The OU 2 draft Phase II RFI/RI Work Plan (Bedrock) was delivered to EPA/CDH on the milestone date of February 5, 1991.

An Interim Plan for Prevention of Contaminant Dispersion (PPCD) was transmitted to EPA and CDH on February 21, 1991, (the IAG milestone date for completing the final PPCD) per DOE instructions, with the concurrence of EPA and CDH. The Interim PPCD is intended to guide field activities until a revised final PPCD is completed and put in place in late July 1991. Work is in progress to finalize the PPCD and submit it to EPA and CDH by July 22, 1991.

### **2.2 PROBLEMS AND PROGRAMMATIC ISSUES**

CN Geotech, the DOE subcontractor for construction of the 881 Hillside Area treatment facility and the temporary decontamination pad, has stated that construction of the decontamination pad cannot begin because of potential over-commitment of funds due to subcontractor claims for recent delays associated

with the security enhancements at the 881 Hillside Area treatment facility and change orders to the original Statement of Work. RFO has discussed the increased costs associated with the project with DOE-Grand Junction and will expedite the transfer of funds to complete the decontamination pad. This delay will impact the start of fieldwork for the OU 1 and OU 2 remedial investigations.

The OU 2 - 903 Pad Phase II RFI/RI alluvial fieldwork, originally scheduled to begin on February 5, 1991, will be delayed. This delay is a result of increased security requirements in January and February due to the Desert Storm Operations and revised DOE procurement procedures that caused delays in critical procurements in December and January. The temporary decontamination pad must also be completed and operational before initiation of fieldwork.

The remediation and revegetation efforts required by the OU 3 - Offsite Lands Settlement Agreement may be in conflict with CERCLA. DOE and the regulatory agencies will meet to discuss this concern.

Most ER contractors at RFP working onsite have received temporary security clearances that allow them to work onsite unescorted. This will allow construction activities at the OU 1 - 881 Hillside Area to return to their normal pace. It will also allow staff working on other projects who had been assigned as escorts to return to their regular assignments (except for escorts necessary for construction taking place in a security area). However, EG&G staff are being temporarily reassigned to high-priority safeguards and security upgrade projects. This may impact IAG milestones and other ongoing ER projects, depending on the number of personnel reassigned and the duration of the assignment.

### 2.3 NEAR-TERM IAG MILESTONES

<u>OU#</u>	<u>Milestone Description</u>	<u>Scheduled Completion</u>	<u>Actual Completion</u>
OU 2	Submit Draft Phase II RFI/RI Work Plan (Bedrock)	05 Feb 91	05 Feb 91
SW	Submit Final Plan for Prevention of Contaminant Dispersion	21 Feb 91	(1)
OU 1	Submit IM/IRA Implementation Document	22 Feb 91	22 Feb 91
SW	Submit Final Treatability Study Plan	25 Feb 91	(2)
SW	Submit Final Quality Assurance Project Plan	01 Mar 91	(3)
SW	Submit Final Standard Operating Procedures	01 Mar 91	(3)
OU 2	Field Treatability Test System Installation Complete	08 Mar 91	(4)
OU 2	Begin Field Treatability Testing	11 Mar 91	(4)
SW	Submit Draft Plan for Discharge Limits for Radionuclides	05 Apr 91	(5)
OU 1	Begin Phase II-A IM/IRA Construction	01 Apr 91	
OU 3	Submit Final Past Remedy Report	02 Apr 91	
OU 5	Submit Draft Phase I RFI/RI Work Plan	05 Apr 91	
OU 3	Submit Final Historical Information/Preliminary Health Risk Assessment Report	16 Apr 91	
OU 6	Submit Draft Phase I RFI/RI Work Plan	19 Apr 91	

(1) Interim PPCD submitted 2/21/91. Final now scheduled for 7/22/91.

(2) Rescheduled for 6/3/91.

(3) Rescheduled from 1/25/91 and 2/1/91.

(4) Request to reschedule submitted to EPA/CDH by DOE.

(5) Rescheduled from 3/18/91.

### **3.0 PROJECT STATUS**

#### **3.1 OU 1 - 881 HILLSIDE AREA**

**DESCRIPTION:** The soil and groundwater at the 881 Hillside Area, Operable Unit 1 (OU 1), located north of Woman Creek in the southeast section of RFP, were contaminated in the 1960s and 1970s with solvents and radionuclides. The various waste management sites that make up OU 1 are being investigated and treated as high-priority sites because of elevated concentrations of organic compounds in the groundwater and the proximity of the contamination to a drainage system leading to a municipal drinking water supply. The selected Interim Remedial Action (IRA) at OU 1 involves construction of an underground drainage system (French drain) that will intercept and contain contaminated groundwater flowing from the OU 1 area. The contaminated water will be treated and released back into the interceptor trench alongside Woman Creek.

##### **3.1.1 OU 1 Assessment**

###### **MILESTONE ACCOMPLISHMENTS:**

Submit Draft Phase III RFI/RI Work Plan	06 Feb 90
Submit Final Phase III RFI/RI Work Plan	30 Oct 90

###### **FEBRUARY WORK ACTIVITY STATUS:**

EG&G's contractor for the OU 1 - 881 Hillside Area Phase III RFI/RI began work on the project on February 25, 1991, under a letter contract while the final contract is being negotiated. Tasks underway include preparation of the site-specific Health and Safety Plan, detailed project scheduling, and initial project procurements. The RFI/RI will investigate and define the site physical characteristics, define the sources of contamination, and describe the nature and extent of contamination. Fieldwork cannot begin until the temporary decontamination pad is completed and operational.

###### **PLANNED WORK FOR MARCH:**

Responses to the EPA/CDH comments on the RFI/RI Work Plan will be completed and submitted during March 1991, and the contract to implement the work plan will be finalized.

The Health and Safety Plan for the RFI/RI will be completed, and field procurements/mobilization for the fieldwork will continue.

Work will begin on the Environmental Evaluation fieldwork.

###### **PROBLEMS:**

Start of the actual fieldwork for the RFI/RI will be delayed because of procurement delays in December 1990 and January 1991 and the delay in completion of the temporary decontamination pad.

**OPEN ITEMS:** None

### **3.1.2 OU 1 Remediation**

#### **MILESTONE ACCOMPLISHMENTS:**

Submit Draft Proposed IM/IRA Decision Document	18 Sep 89
Submit Proposed IM/IRA Decision Document	06 Oct 89
Submit Final IM/IRA Decision Document	05 Jan 90
Begin Phase I-A IM/IRA Construction	15 Jan 90
Restart Phase I-A Construction after shutdown	20 Jun 90
Begin Phase I-B IM/IRA Construction (ahead of schedule)	28 Sep 90
Submit IM/IRA Implementation Document	22 Feb 91

#### **FEBRUARY WORK ACTIVITY STATUS:**

The Implementation Document for OU 1 - 881 Hillside Area was submitted to EPA/CDH on the February 22, 1991, IAG milestone date. This document included the specifications and drawings for all phases of the IRA construction. It will be reviewed by EPA and CDH; however, formal approval is not required.

Favorable weather and a new 10-hour, four-day, work week schedule have accelerated IRA construction at the OU 1 - 881 Hillside Area site. The 891 Treatment Building is 99 percent enclosed, and influent tank insulation and the sewer line tie-in is complete. The building utilities trenching continues, and forms for some of the influent storage tanks containment basin were installed.

Preparation of the Construction Contract Package for the Phase II-A Treatment System started in January 1991 and experienced a one-month schedule slip because of the increased security procedures in late January and February 1991. Installation of the process treatment system is scheduled to begin in April 1991.

#### **PLANNED WORK FOR MARCH:**

Procurement package bids for the Phase II-A Effluent Storage Tanks, issued in February 1991, will be opened in mid-March 1991. EG&G review of the bid proposals for the Phase II-A Ion Exchange System will also be completed in March 1991.

Phase I-B IM/IRA construction of the treatment building will continue in March 1991, and the influent tank foundation will be completed.

#### **PROBLEMS:**

Construction of the OU 1 - 881 Hillside Area Phase I-B Treatment Building experienced delays in January and February 1991, due to the revised security procedures and the requirement that all uncleared contractors be escorted by RFP personnel. Most contractors have now received temporary clearances that allow them to work onsite unescorted. The impact of the delays in January and February is being evaluated.

CN Geotech, the DOE subcontractor for construction of the 881 Hillside Area treatment facility and the

temporary decontamination pad, has stated that construction of the decontamination pad cannot begin because of potential over-commitment of funds due to subcontractor claims for recent delays associated with the security enhancements at the 881 Hillside Area treatment facility and change orders to the original Statement of Work. RFO has discussed the increased costs associated with the project with DOE-Grand Junction and will expedite the transfer of funds to complete the decontamination pad.

OPEN ITEMS: None

### **3.2 OU 2 - 903 PAD, MOUND, AND EAST TRENCHES**

**DESCRIPTION:** The contamination at the 903 Pad and Mound areas is largely attributed to the storage in the 1950s and 1960s of waste drums that corroded over time, allowing hazardous and radioactive materials to leak into the surrounding soil. Additional contamination may have resulted from wind dispersion during removal and soil movement activities. The East Trenches Area was used for disposal of plutonium- and uranium-contaminated waste and sanitary sewage sludge from 1954 to 1968. Two areas adjacent to the trenches were used for spray irrigation of sewage treatment plant effluent, some of which may have contaminants that were not removed by the treatment system.

The IM/IRA Plan provides for surface water in source areas of contamination to be treated and discharged to the surface water system. DOE expects to start up a field-scale treatability unit in 1991. The effectiveness of the treatment process will be evaluated at three points: at the entrance to the treatment facility, at several points within the facility, and at the discharge point. After completion of the field-scale treatability tests, the unit is anticipated to remain in service until the final remedial action is operational.

#### **3.2.1 OU 2 Assessment**

**SCOPE OF WORK CHANGES:** None

**TECHNICAL APPROACH CHANGES:** None

#### **MILESTONE ACCOMPLISHMENTS:**

Submit Draft Phase II RFI/RI Work Plan (Alluvial)	21 Dec 89
Submit Final Phase II RFI/RI Work Plan (Alluvial)	12 Apr 90
Submit Draft Phase II RFI/RI Work Plan (Bedrock)	05 Feb 91

#### **FEBRUARY WORK ACTIVITY STATUS:**

The draft Phase II RFI/RI Work Plan (Bedrock) was delivered to EPA/CDH on its milestone date of February 5, 1991.

A draft revision to the Phase II RFI/RI Work Plan (Alluvial) was prepared. The revision includes a soil sampling plan and an environmental evaluation plan.

#### **PLANNED WORK FOR MARCH:**

The revision to the Phase II RFI/RI Work Plan (Alluvial) will be completed.

EPA/CDH will continue review of the Phase II RFI/RI Work Plan (Bedrock).

#### **PROBLEMS:**

Phase II RFI/RI alluvial fieldwork, originally scheduled to begin on February 5, 1991, has been delayed.

This delay is a result of increased security requirements and revised procurement procedures. The temporary decontamination pad must also be completed and operational before initiation of fieldwork. This construction activity has not yet been started because of the delays discussed in the OU 1 Remediation Report.

OPEN ITEMS: None

### 3.2.2 OU 2 Remediation

SCOPE OF WORK CHANGES: None

TECHNICAL APPROACH CHANGES:

EG&G has proposed that the Interim Remedial Action activities for OU 2 will be divided into two separate projects. Revised draft schedules were submitted to EPA for comments in February 1991 for the South Walnut Creek and Woman Creek projects.

MILESTONE ACCOMPLISHMENTS:

Submit Draft Proposed IM/IRA Decision Document	19 Jun 90
Submit Proposed IM/IRA Decision Document	18 Sep 90
Submit Draft Responsiveness Summary	13 Dec 90
Submit Final Responsiveness Summary and Final IM/IRA Decision Document	11 Jan 91

FEBRUARY WORK ACTIVITY STATUS:

An agreement among DOE, EPA, and CDH was made to divide the OU 2 - 903 Pad, Mound, and East Trenches IRA into two phases. In the first phase, water from seeps in the South Walnut Creek drainage will be collected and treated; in the other phase, the same activities will be conducted for the Woman Creek drainage. The division of the original scope of work was based on public comment to the Interim Remedial Action Plan (IRAP). Contracts for the final design and equipment procurement for the Walnut Creek drainage IRA are being negotiated, and that phase will follow the current IAG OU 2 IRA schedule. The schedule for the Woman Creek drainage phase has been developed and submitted to EPA/CDH for review. Results of bench-scale testing in the spring of 1992 will determine the specific remedial technologies to be recommended for the Woman Creek IRA. The change will have no impact on the Phase II Remedial Investigation or Final Remedial Action.

Preparation for the OU 2 South Walnut Creek Surface Water IRA construction activities is in progress. The contractor's design submittals continue to be reviewed. Upon approval, the construction contractor will proceed with procurement and fabrication of the treatment equipment. RFO- and contractor-generated construction plans and procedures will be reviewed during the week of March 4, 1991. RFO is continuing to prepare revised schedules for the OU 2 South Walnut Creek IRA activities. It is anticipated that the Granular Activated Carbon (GAC) treatment system for Walnut Creek will be operational in the spring of 1991.

**PLANNED WORK FOR MARCH:**

DOE and regulatory agency review of the South Walnut Creek construction plans and procedures for installation and operation of the GAC treatment system will be completed.

Procurement of IRA equipment will continue.

**PROBLEMS:**

DOE-HQ did not issue a Finding of No Significant Impact (FONSI) statement for the OU 2 - 903 Pad, Mound, and East Trenches Interim Measure/Interim Remedial Action Plan/Environmental Assessment (IM/IRAP/EA ) on February 8, 1991, as scheduled in the IAG. NEPA requires approval of the IM/IRAP/EA and the FONSI by DOE-HQ prior to the start of construction now scheduled for late spring 1991.

**OPEN ITEMS:** None

### 3.3 OU 3 - OFFSITE AREAS

**DESCRIPTION:** OU 3 can be divided into two categories based on the two drivers of the activities. The IAG directs activities according to CERCLA and NEPA. This involves assessment of contamination in offsite areas: Contamination of the Land Surface (SWMU 199), Great Western Reservoir (SWMU 200), Standley Lake (SWMU 201), and Mower Reservoir (SWMU 202). The second category responds to a 1985 out-of-court lawsuit settlement, McKay v. U.S., which directed that the surface soil contamination be remediated. Remedial activities began in 1985. The disturbance resulting from remediation is being revegetated as directed by the Settlement Agreement. The overall schedule for this activity is determined by the year-to-year success of the revegetation effort and requirements of the land owners.

**SCOPE OF WORK CHANGES:** None

**TECHNICAL APPROACH CHANGES:** None

#### **MILESTONE ACCOMPLISHMENTS:**

Submit Draft Past Remedy Report	26 Oct 90
Submit Draft Historical Information/Preliminary Health Risk Assessment Report	09 Nov 90

#### **FEBRUARY WORK ACTIVITY STATUS:**

Technical evaluation of the proposal for the Phase I RI Work Plan was completed in February 1991, and contract negotiations began. Contract award is expected in early March 1991.

A Statement of Work for a contract for revegetation activities under the 1985 Settlement Agreement as presented in the Annual Report to Jefferson County (discussed in the January 1991 monthly report) was prepared. A contractor for the fieldwork is scheduled to be in place by May 1, 1991. The fieldwork will begin as the growing season dictates.

DOE received EPA/CDH review comments on the SWMU 199 Final Draft Past Remedy Report on February 1, 1991 and the Final Draft Historical Information Summary and Preliminary Health Risk Assessment Report on February 15, 1991. The response to comments on both documents is being prepared.

#### **PLANNED WORK FOR MARCH:**

Comments on the Final Draft Past Remedy Report and the Final Draft Historical Information Summary and Preliminary Health Risk Assessment will be resolved, and the final documents will be prepared for submittal in April 1991.

The contract to prepare the Phase I RFI/RI Work Plan will be awarded.

**PROBLEMS:**

The remediation and revegetation efforts required by the Settlement Agreement may be in conflict with CERCLA. DOE and the regulatory agencies will meet to discuss this concern.

**OPEN ITEMS:** None

### **3.4 OU 4 - SOLAR PONDS**

**DESCRIPTION:** Five evaporation ponds were used for storage of low-level radioactive process waste, sanitary treatment plant effluent, and contaminated groundwater collected downgradient of the ponds. The ponds are RCRA interim status regulated units that are currently under closure. Leakage from the ponds has contaminated soils and groundwater with various contaminants, including heavy metals and uranium.

**SCOPE OF WORK CHANGES:** None

**TECHNICAL APPROACH CHANGES:** None

#### **MILESTONE ACCOMPLISHMENTS:**

Submit Draft Phase I RFI/RI Work Plan

08 Jun 90

#### **FEBRUARY WORK ACTIVITY STATUS:**

The Environmental Assessment for the Dewatering and RCRA Partial Closure Action on the Solar Evaporation Ponds was approved by DOE-HQ on February 13, 1991. The FONSI, which is required before work can commence, should be approved by DOE-HQ in the near future.

The draft Phase I RFI/RI Work Plan was submitted to EPA/CDH in 1990. EPA/CDH will begin review of the plan in July 1991 and will finish in September 1991. The time lag between the submittal date and the scheduled review period is a result of the reprioritization of Operable Units, which occurred in June 1990.

#### **PLANNED WORK FOR MARCH:**

No scheduled activities.

**PROBLEMS:** None

**OPEN ITEMS:** None

### **3.5 OU 5 - WOMAN CREEK**

**DESCRIPTION:** This activity encompasses assessment and remediation at the Woman Creek drainage, to include: Original Landfill; Ash Pits 1-4, Incinerator, and Concrete Wash Pad; Retention Ponds C-1 and C-2; and the surface disturbance southeast of Building 881.

**SCOPE OF WORK CHANGES:** None

**TECHNICAL APPROACH CHANGES:** None

#### **MILESTONE ACCOMPLISHMENTS:**

The first IAG milestone for this OU is scheduled for April 1991.

#### **FEBRUARY WORK ACTIVITY STATUS:**

The preliminary draft RFI/RI Work Plan, which includes the Environmental Evaluation Work Plan for OU 5 - Woman Creek, is in process and will undergo internal EG&G and DOE-RFO review and finalization in preparation for its delivery to EPA and CDH on April 5, 1991.

#### **PLANNED WORK FOR MARCH:**

DOE and EG&G internal review of the draft RFI/RI Work Plan will continue in March 1991 in preparation for delivery to EPA/CDH on April 5, 1991.

**PROBLEMS:** None

**OPEN ITEMS:** None

### **3.6 OU 6 - WALNUT CREEK**

**DESCRIPTION:** This activity encompasses assessment and remediation at the Walnut Creek Drainage, to include: Sludge Dispersal; Retention Ponds A-1, A-2, A-3, A-4, A-5, B-1, B-2, B-3, B-4, and B-5; Old Outfall; Triangle Area; Trenches A, B, and C; and North, East, South, and Pond Spray Field Areas.

**SCOPE OF WORK CHANGES:** None

**TECHNICAL APPROACH CHANGES:** None

#### **MILESTONE ACCOMPLISHMENTS:**

The first IAG milestone for this OU is scheduled for April 1991.

#### **FEBRUARY WORK ACTIVITY STATUS:**

The Preliminary Draft RFI/RI Work Plan, which includes the Environmental Evaluation Work Plan for OU 6 - Walnut Creek, is in process and will undergo internal EG&G and DOE-RFO review and finalization in preparation for delivery to EPA and CDH on April 19, 1991.

#### **PLANNED WORK FOR MARCH:**

EG&G and DOE review of the draft RFI/RI Work Plan will continue in March 1991 in preparation for delivery to EPA/CDH on April 19, 1991.

**PROBLEMS:** None

**OPEN ITEMS:** None

### **3.7 OU 7 - PRESENT LANDFILL**

**DESCRIPTION:** The Present Landfill began operation in 1968. The landfill provided a means of disposing nonradioactive and nonhazardous solid waste. Some of the solid wastes from the plant, which were disposed in the landfill, contained hazardous waste and/or hazardous constituents. Although currently operating as a nonhazardous sanitary landfill, the facility is considered an inactive hazardous waste disposal unit.

**SCOPE OF WORK CHANGES:** None

**TECHNICAL APPROACH CHANGES:** None

#### **MILESTONE ACCOMPLISHMENTS:**

Submit Draft Phase I RFI/RI Work Plan

08 Jun 90

#### **FEBRUARY WORK ACTIVITY STATUS:**

The draft RFI/RI Work Plan was submitted to EPA/CDH in 1990, and EPA has provided EG&G with preliminary comments on the plan. No activities are scheduled until the EPA/CDH review of the Work Plan is completed in July 1991, in accordance with the IAG activities schedule.

#### **PLANNED WORK FOR MARCH:**

EPA/CDH review of the RFI/RI Work Plan will continue.

**PROBLEMS:** None

**OPEN ITEMS:** None

### **3.8 OU 8 - 700 AREA**

**DESCRIPTION:** This activity involves assessment of the 700 Area, which includes several Solid Waste Management Units. These units include multiple solvent spills, a valve vault west of Building 707, several liquid waste storage tanks, several cooling tower blowdown facilities, and numerous potential chemical and/or process waste leaks.

**SCOPE OF WORK CHANGES:** None

**TECHNICAL APPROACH CHANGES:** None

**MILESTONE ACCOMPLISHMENTS:**

The first IAG milestone for this OU is scheduled for May 1992.

**FEBRUARY WORK ACTIVITY STATUS:**

No activities are scheduled until October 1991.

**PLANNED WORK FOR MARCH:**

No scheduled activities.

**PROBLEMS:** None

**OPEN ITEMS:** None

### **3.9 OU 9 - ORIGINAL PROCESS WASTE LINES**

**DESCRIPTION:** This activity involves characterizing a series of tanks and associated process waste lines. The system was constructed to transport and temporarily store aqueous process wastes. Soil characterization studies will determine the need for soil removal and/or treatment. The subsequent EPA/CDH review of the RF/RI Work Plan has been rescheduled to July 1991 as a result of the reprioritization of IAG activities in June 1990.

**SCOPE OF WORK CHANGES:** None

**TECHNICAL APPROACH CHANGES:** None

**MILESTONE ACCOMPLISHMENTS:**

Submit Draft Phase I RF/RI Work Plan

08 Jun 90

**FEBRUARY WORK ACTIVITY STATUS:**

The draft RF/RI Work Plan was submitted to EPA/CDH in 1990. No activities are scheduled until July 1991, when EPA/CDH will begin review of the plan, in accordance with the IAG activities schedule.

**PLANNED WORK FOR MARCH:**

No scheduled activities.

**PROBLEMS:** None

**OPEN ITEMS:** None

### **3.10 OU 10 - OTHER OUTSIDE CLOSURES**

**DESCRIPTION:** An RFI/RI Work Plan is currently in preparation. OU 10 is made up of 13 SWMUs consisting of various hazardous waste units. The primary components of the RFI/RI Work Plan for OU 10 will be a Field Sampling Plan (FSP), Baseline Risk Assessment Plan (BRAP), and an Environmental Evaluation (EE) Work Plan.

**SCOPE OF WORK CHANGES:** None

**TECHNICAL APPROACH CHANGES:** None

#### **MILESTONE ACCOMPLISHMENTS:**

This first IAG milestone for this OU is scheduled for November 1991.

#### **FEBRUARY WORK ACTIVITY STATUS:**

EG&G will issue the Draft RFI/RI Work Plan for internal review in October 1991.

#### **PLANNED WORK FOR MARCH:**

The EE Work Plan for OU 10, which will be incorporated into the RFI/RI Work Plan, is expected to be initiated in March or April 1991.

**PROBLEMS:** None

**OPEN ITEMS:** None

### **3.11 OU 11 - WEST SPRAY FIELD**

**DESCRIPTION:** The West Spray Field is located within Rocky Flats property boundary immediately west of the plant security area. The West Spray Field was in operation from April 1982 to October 1985. During operation, excess liquids from the solar evaporation ponds 207-B North and Center (contaminated groundwater in the vicinity of the ponds and treated sanitary sewage effluent ) were pumped periodically to the West Spray Field for spray application. The spray field boundary covers an area of approximately 105.1 acres, 38.8 of which received direct application of hazardous waste. The RFI process will entail field studies to determine the presence and levels of hazardous constituents in soil and groundwater.

**SCOPE OF WORK CHANGES:** None

**TECHNICAL APPROACH CHANGES:** None

#### **MILESTONE ACCOMPLISHMENTS:**

Submit Draft Phase I RFI/RI Work Plan

08 Jun 90

#### **FEBRUARY WORK ACTIVITY STATUS:**

The draft RFI/RI Work Plan was submitted to EPA/CDH in 1990. No activities are scheduled until July 1991, when EPA/CDH will begin review of the plan. The time lag between submittal of the work plan and EPA/CDH review is a result of the reprioritization of IAG activities in June 1990.

#### **PLANNED WORK FOR MARCH:**

No scheduled activities.

**PROBLEMS:** None

**OPEN ITEMS:** None

### 3.12 SITE-WIDE ACTIVITIES

**DESCRIPTION:** The Site-Wide programs assessment includes several tasks that encompass a wide variety of plans, procedures, reports, studies, and other activities required by the IAG and that apply to RFP in general.

**SCOPE OF WORK CHANGES:** None

**TECHNICAL APPROACH CHANGES:** None

#### **MILESTONE ACCOMPLISHMENTS:**

Submit Draft Background Study Report (Water)	15 Dec 89
Submit Draft Background Study Report (Soils)	15 Dec 89
Submit Draft Community Survey Plan	23 Jan 90
Submit Final Community Survey Plan	22 Mar 90
Submit Draft Health and Safety Plan	15 Aug 90
Submit Draft Quality Assurance Project Plan	29 Aug 90
Submit Draft Standard Operating Procedures	29 Aug 90
Submit Draft Plan for Prevention of Contaminant Dispersion	19 Sep 90
Submit Draft Treatability Study Plan	21 Sep 90
Submit Draft Community Relations Plan	01 Nov 90
Submit Final Health and Safety Plan	12 Nov 90
Submit Revised Background Study Report	21 Dec 90
Submit Final Community Relations Plan	22 Jan 91

#### **FEBRUARY WORK ACTIVITY STATUS:**

In accordance with Part 42 of the IAG, on February 8, 1991, EPA/CDH granted the extensions listed below to several Site-Wide milestone dates as requested by DOE. The extensions were associated with recent revisions to DOE procurement policies, which resulted in 60-day delays on many contract activities.

The following documents, which were due to EPA/CDH on January 25, 1991, are now due on March 1, 1991:

- Final Standard Operating Procedure Addendum for OU1 Phase III RFI/RI Work Plan
- Final Standard Operating Procedures
  - Volume 4 - Surface Water
  - Volume 5 - Ecology

The following documents, which were due to EPA/CDH on February 1, 1991, are now due on March 1, 1991:

- Final Quality Assurance Project Plan
- Final Standard Operating Procedures
  - Volume 1 - Field Operations
  - Volume 2 - Groundwater
  - Volume 3 - Geotechnical
  - Volume 6 - Air

**- Final Standard Operating Procedure Addendum for OU 2 Phase II RF/RI Work Plan**

In addition, the draft Work Plan for Discharge Limits for Radionuclides, which was due on March 18, 1991, is due on April 5, 1991, and the Final Treatability Study Plan, which was due on February 25, 1991, is due on June 3, 1991.

A public meeting on the Rocky Flats Plant Community Relations Plan was hosted by DOE on February 21, 1991. This was the first of two public meetings scheduled for the plan, which is also subject to a 60-day comment period that began January 30, 1991. The second public meeting will be held on March 13, 1991. The plan was developed in accordance with the IAG.

An Interim PPCD was transmitted to EPA and CDH on February 21, 1991, (the IAG milestone date for completing the final PPCD) per DOE instructions, with the concurrence of EPA and CDH. The Interim PPCD is intended to guide field activities until a revised final PPCD is completed and put in place in late July 1991. Work is in progress to finalize the PPCD and submit it to EPA and CDH by July 22, 1991. The final PPCD will provide for the management of wastes at individual sites in such a manner as to prevent airborne dispersion of hazardous materials.

Prior to their submittal to EPA/CDH on the March 1, 1991, milestone date, the Site-Wide Quality Assurance Project Plan (QAPP) and the Site-Wide Standard Operating Procedures (SOPs) are being reviewed by DOE-RFO. These documents are requirements of the IAG. The QAPP describes the Site-Wide Quality Assurance (QA) requirements that will be implemented by DOE - Rocky Flats' operating contractor, EG&G Rocky Flats, Inc., and all subcontractors conducting remedial investigations and feasibility studies at RFP. The SOPs detail the field techniques to be utilized during investigation of the sites and provide guidance for the performance of all fieldwork to ensure that work required by the IAG is performed in accordance with EPA/CDH-approved methods. Pending EPA/CDH approval of the QAPP and SOPs, a readiness review will be conducted prior to the start of any field activities to verify that all elements are in place.

Contract negotiations for the Historical Release Report (HRR) were completed February 8, 1991. Preparation of the draft HRR began immediately, and the draft report is on schedule for its January 8, 1992, delivery to EPA/CDH.

The first draft of the Discharge Limits for Radionuclides Work Plan was completed. The plan will be internally reviewed and revised in preparation for submittal to the regulatory agencies on April 5, 1991.

Work continued on the draft Site-Wide Treatability Study Plan to incorporate regulatory agency comments into the plan.

**PLANNED WORK FOR MARCH:**

Review and incorporation of comments into the preliminary draft Discharge Limits for Radionuclides Work Plan in preparation for its submittal to the regulatory agencies on April 5, 1991, will continue.

A contract modification to incorporate regulatory agency comments into the draft PPCD will be awarded.

The final Site-Wide QAPP and the Site-Wide SOPs will be delivered to the regulatory agencies.

The second public meeting on the final Community Relations Plan will be held on March 13, 1991.

**PROBLEMS: None**

**OPEN ITEMS: None**

#### 4.0 ROUTINE ENVIRONMENTAL MONITORING

The following generalized sampling schedule for Routine Environmental Monitoring is provided as requested in Section 210 of the IAG. EPA and the State may contact EG&G to arrange for an EPA- or State-authorized representative to observe fieldwork and to obtain split or duplicate samples. Field teams are continually taking these samples, and a further breakdown of the sample schedule would therefore not be feasible.

##### SURFACE WATER AND SEDIMENTS:

Each of the Surface Water Stations (approximately 120 stations) are sampled monthly.

Each of the Sediment Stations (approximately 40 stations) are sampled quarterly.

Each surface water and sediment sample is analyzed for the following parameters:

CLP TCL VOAs	Major Anions
CLP TAL Metals	Radionuclides
plus Cesium	Indicator Parameters
Lithium	Field Parameters
Molybdenum	pH
Strontium	Temperature
Tin	Specific Conductivity
	Dissolved Oxygen (DO)

##### SOILS:

Each of the Soil Stations (located at 1- and 2- mile radii from the plant center) are sampled annually.

Each soil sample is analyzed for plutonium and americium.

##### GROUNDWATER:

Each of the Groundwater Stations (approximately 346) are sampled quarterly; this includes 187 alluvial wells, 103 bedrock wells, and 56 pre-1986 wells. Approximately 116 of the wells are monitored monthly for water levels.

Each groundwater sample is analyzed for the following parameters:

Radiochemical Parameters	CLP TCL VOAs
Gross Alpha	CLP TAL Metals
Gross Beta	Inorganic Parameters
Tritium	Nitrate/Nitrite
Uranium	Total Phosphorous
Plutonium	Ortho-Phosphate
Americium	Ammonia
Strontium	
Cesium	